

WHAT IS CLAIMED IS:

1. A solid-state image sensor comprising a photosensitive array for capturing incident light from a desired scene,

said photosensitive array comprising a plurality of photo-sensors arranged in a direction of row and a direction of column, and microlenses formed respectively on the photo-sensors, each of said plurality of photo-sensors corresponding to a particular pixel included in the photosensitive array,

each of said plurality of photo-sensors comprising a first photosensitive cell having first sensitivity for photoelectrically transducing the incident light, and a second photosensitive cell having second sensitivity lower than the first sensitivity for photoelectrically transducing the incident light,

each of said microlenses causing the incident light to converge to corresponding one of said plurality of photo-sensors,

each of said microlenses having an optical center shifted from a center of corresponding one of said plurality of photo-sensors toward a center of said photosensitive array.

2. The sensor in accordance with claim 1, wherein each of said plurality of photo-sensors is arranged at a fixed pitch in the direction of row and the direction of column in a substantially square matrix.

3. The sensor in accordance with claim 1, each of said plurality of photo-sensors is shifted from adjoining one of said plurality of photo-sensors by a distance substantially corresponding to a half of a pitch between photo-sensors neighboring to each other in the direction of row and the direction of column.

4. The sensor in accordance with claim 1, wherein the second photosensitive cell of each of said plurality of photo-sensors is arranged at one side of the corresponding first photosensitive cell,

in the photo-sensor having the second photosensitive cell arranged nearer to the center of the photosensitive array with respect to the first photosensitive cell, the optical center of the corresponding microlens being shifted toward the second photosensitive cell of the photo-sensor.

5. The sensor in accordance with claim 2, wherein the second photosensitive cell of each of said plurality of photo-sensors is arranged at one side of the corresponding first photosensitive cell,

in the photo-sensor having the second photosensitive cell arranged nearer to the center of the photosensitive array with respect to the first photosensitive cell, the optical center of the corresponding microlens being shifted toward the second photosensitive cell of the photo-sensor.

6. The sensor in accordance with claim 3, wherein the second photosensitive cell of each of said plurality of photo-sensors is arranged at one side of the corresponding first photosensitive cell,

in the photo-sensor having the second photosensitive cell arranged nearer to the center of the photosensitive array with respect to the first photosensitive cell, the optical center of the corresponding microlens being shifted toward the second photosensitive cell of the photo-sensor.

7. The sensor in accordance with claim 4, wherein said microlenses are arranged such that the photo-sensors nearer to an edge of said photosensitive array are shifted to a further

extent.

8. The sensor in accordance with claim 5, wherein said microlenses are arranged such that the photo-sensors nearer to an edge of said photosensitive array are shifted to a further extent.

9. The sensor in accordance with claim 6, wherein said microlenses are arranged such that the photo-sensors nearer to an edge of said photosensitive array are shifted to a further extent.

10. The sensor in accordance with claim 4, wherein said first photosensitive cell and said second photosensitive cell of each of said plurality of photo-sensors are positioned closer to the center and the edge of the photosensitive array, respectively.

11. The sensor in accordance with claim 5, wherein said first photosensitive cell and said second photosensitive cell of each of said plurality of photo-sensors are positioned closer to the center and the edge of the photosensitive array, respectively.

12. The sensor in accordance with claim 6, wherein said first photosensitive cell and said second photosensitive cell of each of said plurality of photo-sensors are positioned closer to the center and the edge of the photosensitive array, respectively.

13. The sensor in accordance with claim 7, wherein said first photosensitive cell and said second photosensitive cell of each of said plurality of photo-sensors are positioned closer to the center and the edge of the photosensitive array,

respectively.

14. The sensor in accordance with claim 8, wherein said first photosensitive cell and said second photosensitive cell of each of said plurality of photo-sensors are positioned closer to the center and the edge of the photosensitive array, respectively.

15. The sensor in accordance with claim 9, wherein said first photosensitive cell and said second photosensitive cell of each of said plurality of photo-sensors are positioned closer to the center and the edge of the photosensitive array, respectively.